Naval Weapons Station Seal Beach

NEWSLETTER OF THE ENVIRONMENTAL INVESTIGATION AND CLEANUP PROGRAM

JULY 2002

This is the third in a series of updates developed to keep you informed about the progress of the Installation Restoration Program at Naval Weapons Station (NAVWPNSTA) Seal Beach. In this update we provide a status report of the Installation Restoration Program sites on NAVWPNSTA Seal Beach. Two earlier updates have been distributed over the past several years to provide information about specific activities at NAVWPNSTA Seal Beach. These earlier updates, and Installation Restoration Program reports and documents, are available from the local information repositories and from contact persons designated for the NAVWPNSTA Seal Beach Installation Restoration Program (see back page for more information).

In the past, some hazardous waste disposal practices, although acceptable at the time, resulted in the release of pollutants into surrounding soil and ***groundwater***. At Naval Weapons Station (NAVWPNSTA) Seal Beach and other military facilities in the United States, the Department of Defense (DoD)– of which the Navy is a component – is investigating and cleaning up these sites through its ***Installation Restoration (IR)*** Program. The goal of the Navy's IR Program is to protect human health and the environment through compliance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA; also known as "Superfund"). The IR Program is broader than Superfund because it also addresses unexploded ***ordnance***, underground and aboveground storage tanks, and other programs.

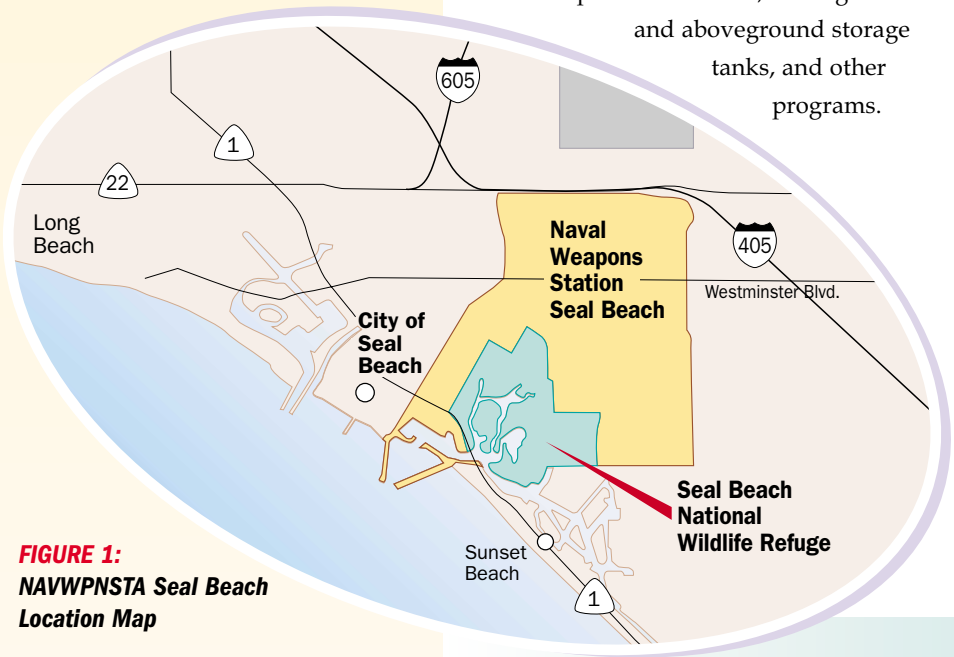

FIGURE 1:
NAVWPNSTA Seal Beach Location Map

Unlike Superfund, IR Program monies come from the Navy's Environmental Restoration, Navy (ER,N) funding.

State and local environmental regulatory agencies are actively working with the Navy to achieve and maintain a healthy and safe environment for NAVWPNSTA Seal Beach and the surrounding community. The NAVWPNSTA Seal Beach, California Department of Toxic Substances Control (DTSC), California Regional Water Quality Control Board (RWQCB), and Orange County Department of Environmental Health Services are cleanup partners in the station's IR Program. DTSC is the lead state regulatory agency for the IR Program, and RWQCB provides technical oversight of IR sites with water quality concerns and underground storage tank sites at the station (see Figure 2).

The public also plays an important part in the success of the IR Program. The Navy holds comment periods and public meetings for proposed cleanups. Notices of these events are placed in local newspapers. In addition, citizens representing the diverse interests of the surrounding communities have joined together to form a ***Restoration Advisory Board (RAB)***. The RAB reviews the Navy's cleanup plans and reports, providing valuable input to the cleanup team of Navy, regulatory agencies, and contractors. For more information on the RAB, see page 11.

Words in ***bold italic*** type are defined in the glossary on page 11.

Installation Restoration Program Goal

The goal of the DoD's IR Program is to reduce, in a cost-effective manner, the risk to human health and the environment from hazardous substance contamination resulting from past DoD activities in the U.S. and its territories. The IR Program uses Risk Management as the primary philosophy in programming, budgeting, and executing the Program.

— *Navy/Marine Corps Installation Restoration Manual*

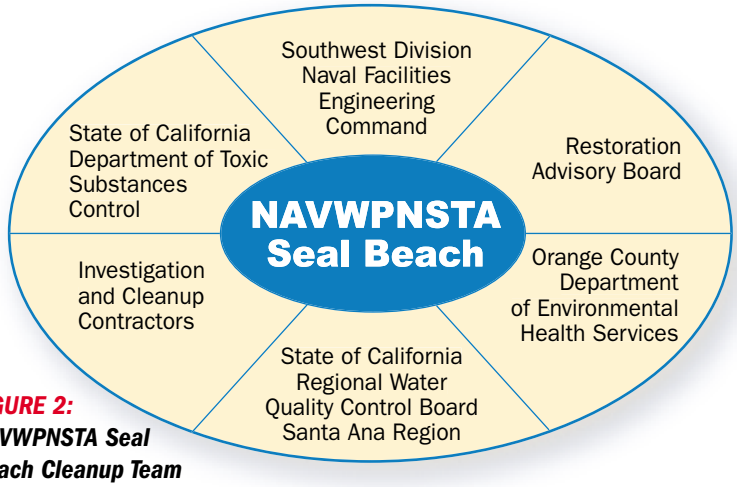

FIGURE 2: ***NAVWPNSTA Seal Beach Cleanup Team***

Regulatory Compliance

All federal agencies – DoD included – are required to comply with environmental laws and regulations. The environmental regulatory compliance program at NAVWPNSTA Seal Beach addresses many federal and state laws and acts, as well as local requirements. The following is a list of some of the more pertinent requirements.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA) - Established "Superfund"; the DoD's Installation Restoration Program meets, and in some cases exceeds, the requirements of CERCLA; addresses the investigation and cleanup of past hazardous materials spills, releases, and disposal.

Resource Conservation and Recovery Act (RCRA) of 1976 – Regulates the current handling and disposal of hazardous materials and hazardous wastes.

Clean Water Act of 1977 – Restores and maintains the chemical, physical, and biological integrity of the nations waters.

Clean Air Act of 1970 – Establishes ambient air quality standards for basic air pollutants, regulates the releases of hazardous substances to the ambient air, and mandates that federal agencies comply with state statutes and regulations regarding clean air.

Endangered Species Act of 1973 – Requires federal agencies to ensure that their actions do not jeopardize the continued existence of listed species or destroy or adversely modify the critical habitats of those species.

National Historic Preservation Act (NHPA) of 1966 (as amended) – Requires CERCLA remedial actions to take into account the effects of remedial activities on any historic properties or cultural resources included on or eligible for the National Register of Historic Places. Other related statutes include the Archaeological and Historic Preservation Act (AHPA) of 1974, the Archaeological Resources Protection Act (ARPA) of 1979, and the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990.

National Environmental Policy Act (NEPA) of 1969 – Assures that environmental factors are given the same consideration as other factors in decision-making by federal offices.

Executive Order 11990 – Wetlands Protection - Directs federal agencies to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural qualities and beneficial qualities of these lands.

California Health and Safety Code, Division 20, Chapter 6.5, et seq. – Contains the state's hazardous waste management laws for the protection of human health and the environment.

Title 22 of the California Code of Regulations (Division 4.5, Health Standards for the Management of Hazardous Waste) - Implements the hazardous waste management statutes contained in the CA Health and Safety Code. Establishes minimum standards that define the acceptable management of hazardous waste and applies to the transfer, treatment, storage, and disposal of hazardous waste.

Porter-Cologne Water Quality Control Act of 1969 (Division 7 of the California Water Code) – Established the State Water Resources Control Board and nine Regional Boards around the state. The Act instructs the Boards to preserve and enhance the quality of California's water resources for the benefit of present and future generations.

For more information...

... on federal environmental laws and regulations, visit the U.S. Environmental Protection Agency's web site at http://www.epa.gov/epahome/laws.htm

...on state laws and regulations, visit the web sites for the State Water Resources Control Board at http://www.swrcb.ca.gov/water_laws/index.html and the California Department of Toxic Substances Control at http://www.dtsc.ca.gov/laws_regs

Words in ***bold italic*** type are defined in the glossary on page 11.

Installation Restoration Program Sites

Due to the nature and extent of its operations, the Navy has used toxic and hazardous materials over several decades. Since environmental studies began in 1985 at NAVWPNSTA Seal Beach, 73 potentially contaminated sites—IR sites, ***solid waste management units [SWMUs]***, and areas of concern (AOCs)—have been identified through the IR Program. **Table 1** (page 4) lists all 73 hazardous waste sites identified at NAVWPNSTA Seal Beach and their status, which is summarized in Figure 3.

The Cleanup Team is committed to continuing the success of site investigation and cleanup and to bringing each IR Program site to closure. To date, five IR sites have been cleaned up through ***removal actions*** (see Table 2 below). Based on current data, it is expected that removal actions, ***removal site evaluations***, ***remedial actions***, or periodic groundwater sampling to monitor site conditions may be required for 15 remaining IR sites and SWMUs. The 15 currently active sites are shown on Figure 4 and discussed on starting page 7.

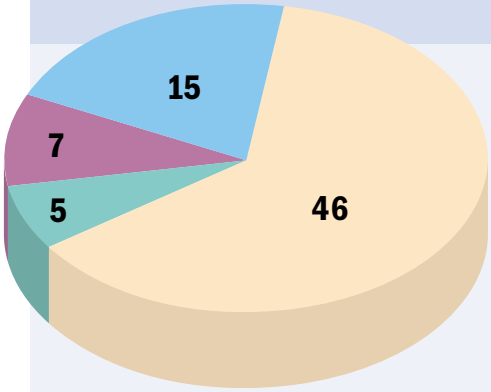

FIGURE 3:
Cleanup Progress

- Investigation Completed
- Sites Cleaned Up
- Sites Addressed under Other (Non-IR) Programs
- Sites in Progress

TABLE 2: ***Site Cleanups Completed***

Site No.	Actions Taken	Dates Completed
1	Excavation and off-site disposal of primarily metals-contaminated soils. Contamination resulted from discharge of industrial wastewater from Building 71.	Implemented between June and November 1999. Closure report approved by DTSC in December 1999.
8	Excavation and off-site disposal of lead-contaminated soil from Building 235 battery shop discharge line adjacent to Seal Beach National Wildlife Refuge.	Implemented in April 1998. Closure report approved by DTSC in October 1999.
9	Excavation and off-site disposal of metals-contaminated soil as a result of sandblast grit disposal.	Implemented in June 1995. Closure report approved by DTSC in August 1998.
19	Excavation and off-site disposal of sandblast grit, debris, and soils primarily contaminated by heavy metals.	Implemented in August 1998. Closure report approved by DTSC in November 1999.
20	Decontamination of floors of rooms in Building 68 where mercury spills occurred.	Implemented in August 1994. Closure report approved by DTSC in July 1995.

NAVWPNSTA Seal Beach History

NAVWPNSTA Seal Beach is located approximately 26 miles south of the Los Angeles urban center (see Figure 1). The station comprises 5,000 acres of land located on the Pacific coast within the city of Seal Beach in Orange County, California. About 911 acres in the southwest portion of the station have been designated as the Seal Beach National Wildlife Refuge. Major urban areas surrounding NAVWPNSTA Seal Beach are the cities of Long Beach, Westminster, Huntington Beach, Los Alamitos, and Seal Beach. The station was originally commissioned in 1944, at the height of World War II, as

The main entrance to the weapons station.

a Naval Ammunition and Net Depot. The name has changed several times since then, and in 1998 the base was redesignated Naval Weapons Station Seal Beach. It is one of several weapons stations maintained by the Navy to provide fleet combatants with ready-for-use ordnance. The station includes headquarters with central and administrative support detachments as well as waterfront, storage, testing, and production facilities that support the station's mission. The station serves as a supply point for a majority of the operating Navy and Marine Corps forces in the Pacific.

Words in ***bold italic*** type are defined in the glossary on page 11.

TABLE 1: *Summary of Installation Restoration Program Locations at NAVWPNSTA Seal Beach*

AOC: Area of Concern
IRP: Installation Restoration Program
NASA: National Aeronautic and Space Administration
NFRAP: No further response action planned
PAHs: polycyclic aromatic hydrocarbons
PCBs: polychlorinated biphenyls
RCRA: Resource Conservation and Recovery Act
RT&E: Research, Testing, and Evaluation
SITES: Identified during 1985 Initial Assessment Study and 1990 Addendum to the Preliminary Assessment carried out under CERCLA.
SWMU: solid waste management unit
TCA: trichloroethane
TCE: trichloroethene
UST: underground strorage tank
VOCs: volatile organic compounds

IRP SITE No.	BRIEF DESCRIPTION	SOURCE TYPE	RELEASE PERIOD	WASTE TYPES	CURRENT STATUS	WORK COMPLTD.
1	Wastewater Settling Pond	Wastewater Settling Pond	1945-1971	Chromic acid, alkali, acid, and metals contaminated wastewater	Removal Action implemented in 1999	✔
2	Evaporation Pond	Wastewater Evaporating Pond	1945-1971	Explosive D (Ammonium Picrate)	NFRAP	✔
3	Cleaning Water Settling Pond	Wastewater Settling Pond	1944-early 1950s	Explosive D (Ammonium Picrate)	NFRAP	✔
4	Perimeter Road	Dust control on roads	mid 1960s-1973	Waste oils	Additional soil investigation in two isolated areas; periodic groundwater sampling	
5	Clean Fill Disposal Area	Landfill	1943-1944	Construction debris and fill. Reported disposal of live ordnance.	Removal Action implemented in 2001; periodic groundwater sampling	
6	Explosives Burning Ground	Explosives burning ground	1945-1971	Various types of ordnance was burned.	Periodic groundwater sampling	
7	Station Landfill	Landfill	Mid 1950s-1973	Solvents, transformer oil. lubricants, lacquer thinner, Polaroid developing solution, paint sludge, asbestos, and mercury.	Removal Action Planned	
8	Battery Shop Drainage from Bldg. 235	Wastewater drainage	1945-1975	Neutralized waste battery acid, lead	Removal Action implemented for soil April 1998; NFRAP for groundwater	✔
9	Sandblast Grit Disposal	Surface disposal	mid 1950s-mid 1960s	Sandblast grit with metals	Removal Action Implemented June 1995	✔
10	Marsh Spill Area	Unknown	Unknown	Acid	NFRAP	✔
11	Pesticide Storage Trailer	Pesticide storage trailer	1983 during fire	Organic and inorganic pesticides	NFRAP	✔
12	NASA Island	Open burning ground	1968-1972	Explosive wastes and protein type fire fighting foams.	NFRAP	✔
13	Raw Sewage Spill	Sewer	1969	Raw sanitary sewage	NFRAP	✔
14	Abandoned USTs	Three USTs	mid 1940s-mid 1960s	Diesel and leaded gasoline	Baseline Survey Report Monitoring	
15	Diesel Fuel Spill	Spill	Oct-83	Diesel	NFRAP	✔
16	Primer/Salvage Yard	Work and disposal yard	1944-1982	Fog oil, smokeless powder, black powder and ordnance debris	NFRAP	✔
17	Bldg. 52 Mercury Spill	Spill in laboratory building	1970	Mercury	NFRAP	✔
18	Rubble Disposal	Landfill	Unknown	Waste from chapel demolition - rubble and inert construction waste	NFRAP	✔
19	Bldg. 241 Disposal Pit	Landfill trenches	1970-mid 1970s	Paint, solvent, mineral oil, waste paints and solvents, automobiles	Removal Action implemented August 1998; NFRAP for groundwater	✔
20	Bldg. 68 Mercury Spill	Spills in building	1960-1967	Mercury	Removal Action completed 1994; NFRAP	✔
21	Disposal Berm	Land application	1966-1974	Freon, waste oils, and black powder	NFRAP	✔
22	Oil Island	Oil production waste holding impoundments	1954	Drilling muds, oily wastes, drill cuttings	Removal Site Evaluation	
23	Bldg. 434 Sample Explosive Demolition Area	Open burning ground	1964-1978	Black powder	NFRAP	✔
24	Bldg. 437 Quench Water Disposal Area	Land application	1950-1960	Experimental propellant contaminated wastewater	NFRAP	✔

Words in ***bold italic*** type are defined in the glossary on page 11.

TABLE 1: Summary of Installation Restoration Program Locations at NAVWPNSTA Seal Beach (cont'd.)

IRP SITE No.	BRIEF DESCRIPTION	SOURCE TYPE	RELEASE PERIOD	WASTE TYPES	CURRENT STATUS	WORK COMPLTD.
25	Bldg. 95 Foam Testing	Fire-suppressant testing yard	1972-1976	Fire-suppressant foams, gasoline	NFRAP	✔
35	Drum Storage Area	Storage yard	Unknown	Unknown liquids - Otto fuel, paints, and solvents suspected	NFRAP	✔
36	Primary Settling Tank	Settling tank	1945-1971	Explosive D (Ammonium Picrate)	NFRAP	✔
37	Bolsa Avenue Storage Yard	Storage yard	Unknown	Transformers, capacitors, waste oil drums	NFRAP	✔
38	X-ray Shop Leach Field	Drainage ditch (land application)	1956-1968	Waste photoprocessing chemicals (Hypoclear and developer)	NFRAP	✔
39	Waste Missile Fuel Tanks	USTs	1958-mid 1970s	Dimmer (missile) fuel	UST Program; no longer in IRP	
40	Concrete Pit/Gravel Area	Engine Work Area and Drainage	late 1940s-1978	Oils and chlorinated solvents	Remedial Action planned	
41	Waste Otto Fuel Tank	UST	1982-1983	Waste Otto fuel	UST Program; no longer in IRP; NFRAP	
42	Auto Shop Sump/ Waste Oil Tank	UST	1950-1972	Waste oil	Removal Action planned for NWR portion of site (pipe discharge); NFRAP for rest of site	
43	Battery Shop Sump	Sumps/drains	1945-present	Neutralized battery acid, cold dip parts cleaner	NFRAP	✔
44	Former Waste Otto Fuel Drum Storage	Drum storage yard	mid 1940s-late 1970s	Unused Otto fuel	Removal Action planned for ditch sediments; NFRAP for rest of site	
45	Bldg. 88 Floor Drain Outlet	Floor drain in operations area	Unknown-early 1980s	Unknown		
46	Paint Booth Filters	Air filter area for paint booth	Unknown-present	Paint filters	NFRAP	✔
47	Sea Scout Anaheim Bay Area	Temporary drum storage	Unknown	Unknown	NFRAP	✔
48	Fuel Spill	Diesel dispensing drum	Unknown	Diesel	NFRAP	✔
49	Boiler and Water Treatment Storage Area	Storage area	Unknown	Sodium phosphate, sulfide, nitrite, muriatic acid, sulfuric acid, liquid chlorine	Operating facility; not in IRP	
50	Public Works Small Bldgs. Area	Container storage	Unknown	Solvents, oils, and pesticides	Operating facility; not in IRP	
51	Electrical Shop	Transformer repair shop	1968-1978	PCBs	Operating facility; not in IRP	
SWMUs 20, 21	Waste Acid Storage Tanks	USTs	1982-present	Stripping and pickling wastes, methylene chloride, retardant, surfactant, phenolic, organic acid; chromic acid, fluoride salts, ferrocyanide salts	RCRA permitted facility not in IRP; To be closed under RCRA	
SWMU 23	Hazardous Waste Storage Facility	Containerized storage area	1983-present	Trichloroethane (TCA), waste batteries, acid, Freon, lacquer thinner, oil, pesticides, paints, methylene chloride	RCRA permitted facility not in IRP	
SWMU 41	Drummed Waste Oil Storage Area	Drum storage area	1972-present	Waste oils	NFRAP	✔
SWMUs 42, 43	Maintenance Shop Oil/Water Separators	Oil/water separators	1980-present	Waste oils	NFRAP	✔
SWMU 17	Waste Otto Fuel Drum Storage Area	Drum storage area	Late 1970s-present	Waste Otto fuel and agitene solvent	NFRAP	✔
SWMU 22	Photo Shop Drainage System	Sink drains	1978-present	Waste photoprocessing chemicals (Hypoclear & developer)	NFRAP	✔
SWMU 24	Stationary Demilitarization Furnace	Furnace with cyclone and baghouse	1984-present	Class C ordnance and combustion products	Removal Action Planned	
SWMU 50	Water Scrubber Collector System	Air treatment unit for removal of sandblast grit	1980s-present	Waste paint and sandblast grit	NFRAP	✔

The Station on a beautiful winter morning.

TABLE 1: *Summary of Installation Restoration Program Locations at NAVWPNSTA Seal Beach (cont'd.)*

IRP SITE No.	BRIEF DESCRIPTION	SOURCE TYPE	RELEASE PERIOD	WASTE TYPES	CURRENT STATUS	WORK COMPLTD.
SWMU 51	Abandoned Paint Locker	Paint locker	Unknown	Old paints and solvents	NFRAP	✔
SWMU 52	Hazardous Waste Drum Storage	Drum storage area	Unknown-present	Sandblasting waste and contaminated rags in 55-gallon drums	NFRAP	✔
SWMU 53	Hazardous Waste Drum Storage	Drum storage area	Unknown-present	Paint-related wastes: empty cans, rags, and other flammable material	NFRAP	✔
SWMU 54	Hazardous Waste Drum Storage	Drum storage area	1984-present	Lead sludge and particulates collected in cyclone from SWMU 24	NFRAP	✔
SWMU 55	Hazardous Waste Drum Storage	Drum storage area	1980s-present	Sludge from water scrubber at SWMU 50	NFRAP	✔
SWMU 56	Hazardous Waste Drum Storage	Drum storage area	1987-present	Waste paint thinner	NFRAP	✔
SWMU 57	Paint Locker Area	Paint locker	Unknown-present	Paints, alcohols, trichloroethylene (TCE), other solvents	Removal Action Planned	
SWMU 58	Paint Locker Area	Paint locker	Unknown-present	Paints, alcohols, TCE, other solvents	NFRAP	✔
SWMU 59	Paint Locker Area	Paint locker	Unknown-present	Paints, alcohols, TCE, other solvents	NFRAP	✔
SWMU 60	Paint Locker Area	Paint locker	Unknown-present	Paints, alcohols, TCE, other solvents	NFRAP	✔
SWMU 61	Paint Locker Area	Paint locker	Unknown-present	Paints, alcohols, TCE, other solvents	NFRAP	✔
SWMU 62	Paint Locker Area	Paint locker	Unknown-present	Paints, alcohols, TCE, other solvents	NFRAP	✔
SWMU 63	Paint Locker Area	Paint locker	Unknown-present	Paints, alcohols, TCE, other solvents	NFRAP	✔
SWMU 64	Paint Locker Area	Paint locker	Unknown-present	Paints, alcohols, TCE, other solvents	NFRAP	✔
SWMU 65	Sandblast Grit Cyclones	Air treatment unit for paint booths	Unknown-present	Waste paint and sandblasting grit	NFRAP	✔
SWMU 66	Sandblast Grit Cyclones	Air treatment unit for paint booths	Unknown-present	Waste paint and sandblasting grit	NFRAP	✔
SWMU 69	Hazardous Waste Drum Storage	Drum storage area	Unknown-present	TCA, rags, toluene, and absorbent	NFRAP	✔
AOC 7	Railroad Supply Yard	Railroad supply yard	Unknown	Sandblast grit and unknown products	NFRAP	✔
AOC 6	External Paint Area	Paint locker	Unknown	Paints	NFRAP	✔
70	RT&E Area	Space program RT&E activities	Unknown	TCE, industrial wastewater	Remedial Action Planned	
73	Water Tower Area	Sandblasting and paint operations	1944 - present	Lead, copper, cadmium, other metals, and PAHs	Removal Action Planned	
74	Old Skeet Range	Skeet shooting	late 1960s - early 1990s	Lead, antimony, and PAHs	Removal Action Planned	
-	Bldg. 128 Strip Pit	Metal finishing operations	1975 - present	Copper, TCE, and other VOCs	NFRAP	✔

Words in ***bold italic*** type are defined in the glossary on page 11.

IR Sites in Progress

➤ **Site 4 – Perimeter Road.** From the mid-1960s to 1973, waste oils were sprayed on the Station perimeter road as a form of dust control. A removal site evaluation was completed in 2001 to determine the nature and extent of contamination at the site and assess potential risk to human health and the environment. The Navy plans additional investigation of lead insoil at two isolated areas and periodic groundwater sampling to monitor site conditions.

➤ **Site 5 – Clean Fill Disposal Area.** This site is within the boundary of the Seal Beach National Wildlife Refuge. During initial construction of NAVWPNSTA Seal Beach, from 1943 to 1944, construction debris and fill dirt were placed at Site 5. Over the years, ordnance and explosives (primarily small arms munitions) were also disposed of there. A removal site evaluation, completed in 2001, recommended a removal action for ordnance items at the site. The removal action was completed in 2002 and resulted in the addition of more than 4 acres of wetlands to the Seal Beach National Wildlife Refuge. The Navy plans additional periodic groundwater sampling to monitor site conditions.

Measuring well depth at Site 70.

➤ **Site 6 – Explosives Burning Ground.** From 1945 to 1971, various types of ordnance were burned at this location. A removal site evaluation was completed in 2001 to gather additional data regarding contamination and risk to human health and the environment. The Navy plans to conduct periodic groundwater sampling to monitor site conditions.

➤ **Site 7 – Station Landfill.** From the mid-1950s to 1973 trash, debris, and other wastes such as solvents, transformer oil, lubricants, paints sludge, asbestos, photo solutions, and mercury, were disposed of at Site 7. Based on groundwater studies and field investigations, the Navy plans a removal action to excavate landfill contents in selected areas and dispose of off-site at an appropriate permitted waste facility, repair the existing soil cover, and conduct periodic groundwater sampling to monitor site conditions.

Developing a groundwater sampling well.

➤ **Site 14 – Abandoned Underground Storage Tanks (USTs).** Three USTs, containing diesel fuel and leaded gasoline, operated at this location from the mid-1940s to mid-1960s. A baseline survey was conducted to determine the extent of subsurface soil and groundwater contamination from a leaking UST. Studies show that fuel contamination has decreased over time. Continued periodic groundwater sampling to monitor site conditions is planned.

➤ **Site 22 – Oil Island.** Oil production waste-holding impoundments were in use at Site 22 in 1954. Wastes held there reportedly included drilling muds, drill cuttings, and oily wastes. A remedial investigation report prepared in the late 1990s recommended a removal action to clean up contaminat-

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Did You Know?

You can read more about the Navy's environmental program on the Internet! The Navy's Southwest Division Environmental Web Page address is http://www.efdsw.navfac.navy.mil/environmental/envhome.htm

Words in ***bold italic*** type are defined in the glossary on page 11.

[Map removed as per Navy World Wide Web Security Regulations]

Words in ***bold italic*** type are defined in the glossary on page **11**.

Map Removed as per Navy World Wide Web Security Regulations

ed soil and groundwater. The Oil Island tenant (Breitburn Energy Corp.) is evaluating removal action alternatives.

➤ **Site 40 – Concrete Pit/Gravel Area.** From the mid 1940s to 1978, oil and solvents used during locomotive maintenance activities in the Locomotive Repair Shop (Building 240) were discharged to an adjacent gravel area. An extended removal site evaluation report was prepared in 1999 that addressed the nature and extent of contamination. A ***feasibility study*** to evaluate clean up alternatives was completed in 2000. The Navy plans a remedial action to clean up the chlorinated solvent contamination in groundwater at Site 40. Periodic groundwater sampling to monitor site conditions is in progress and will continue through implementation of remedial action.

➤ **Site 42 – Auto Shop Sump/Waste Oil Tank.** From 1950 to 1972, waste oil was stored in a UST at Site 42. Based on the results of a focused site inspection report prepared in 2002 that identified potential ecological risk concerns, the Navy plans to conduct a removal action to clean up heavy metal-contaminated sediments along the outfall discharge in the area of the Seal Beach National Wildlife Refuge.

➤ **Site 44/45 – Former Waste Otto Fuel Drum Storage, Building 88 Floor Drain Outlet, and Outside Drainage Ditch Sediments.** From the mid-1940s to the late 1970s, Site 44 served as a drum storage yard for unused Otto fuel (fuel used for torpedoes or other weapons systems). Adjacent to Site 44, Site 45 is the floor drain outlet associated with Building 88. A focused site inspection document completed in 2002 reported potential ecological risks due to levels of

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A vertical-launch missile is loaded onto a guided missile destroyer.

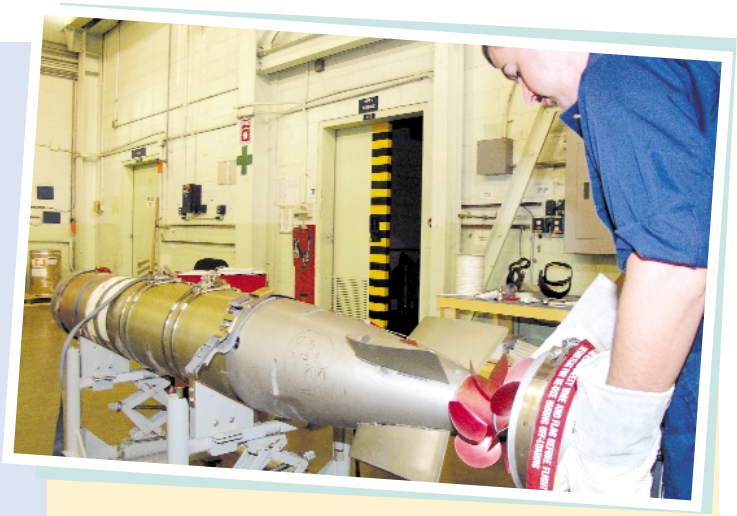
Words in ***bold italic*** type are defined in the glossary on page **11**.

zinc and nickel in the outside drainage ditch. The Navy plans a removal action to address contaminated drainage ditch sediments.

➤ **Site 70 – Research, Testing & Evaluation Area.** Site 70 is the location of a facility built and operated by NASA (the National Aeronautic and Space Administration) between 1962 and 1973 for the design and manufacture of the second stage of the Saturn V launch vehicle for the Apollo Program. During that time, chlorinated solvents (primarily trichloroethene, [TCE]) used in the manufacturing process, were released to the environment resulting in contamination of the groundwater under Site 70. A feasibility study to evaluate cleanup alternatives was completed in 2000. The Navy plans to conduct a remedial action to clean up the groundwater at Site 70. Periodic groundwater sampling to monitor site conditions is in progress and will continue through implementation of remedial action.

➤ **Site 73 – Water Tower Area.** Since 1944, the Water Tower periodically has been painted, stripped, and repainted. Studies reported the presence of several metals in soil, particularly lead from lead-based paint. The focused site inspection report completed in 2002 recommended further action. Because Site 73 falls within a known archaeological site, the Navy's planned removal action will balance the reduction of risks from metals in soil with potential impacts to the archaeological site.

➤ **Site 74 – Old Skeet Range.** From the late 1960s to the early 1990s, skeet shooting activities took place at Site 74. Contaminants of concern identified in studies include lead and antimony in site soil and sediments, which could pose significant ecological risk due to Site 74's proximity to the Seal Beach National Wildlife Refuge. The Navy's planned removal action will balance wetlands habitat protection with the reduction of risk to wildlife from contaminants.



A sailor prepares to do maintenance on a Mk. 46 torpedo.

➤ **SWMU 24 – Stationary Demilitarization Furnace.** This solid waste management unit is the location of the former stationary demilitarization furnace facility, which was used from 1985 to 1994 for the removal of explosive residue from expended munitions. Studies have identified elevated concentrations of metals, such as lead and copper, in soil. The Navy plans a removal action at SWMU 24 due to ecological risks from metals in soil.

➤ **SWMU 57 – Paint Locker Area.** The paint locker was used to store paints, alcohols, and other solvents in support of maintenance operations in the adjacent building. Investigations identified a human health risk due to elevated levels of arsenic in soil at a small area of SWMU 57. Based on results of the 2002 focused site inspection report, the Navy plans a removal action for soil.

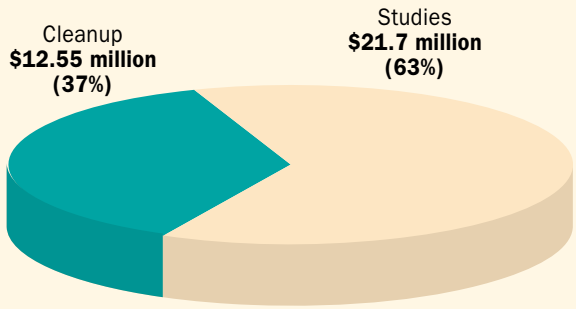


FIGURE 5:
Fiscal Years 1994-2001 IR Program Expenditures

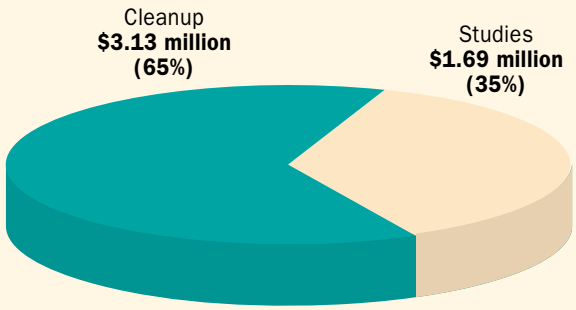


FIGURE 6:
Fiscal Year 2002 Authorized Budget

Significant progress has been made on the IR Program sites at NAVWPNSTA Seal Beach. To date, funding has been expended through two contracts — one for the studies and one for cleanup — and the amounts spent over the past 8 years are shown in ***Figure 5****. Investigation (studies) and cleanup activities currently are being conducted at the 15 sites discussed above.* ***Figure 6*** *presents the Fiscal Year 2002 budget, which shows that the program is moving out of the site study phase and into the site cleanup phase.*

Words in ***bold italic*** type are defined in the glossary on page 11.

Glossary of Terms

Feasibility Study – A phase in the environmental investigation process that develops and evaluates the suitability of appropriate cleanup remedies or solutions.

Groundwater – Water within the earth that moves through permeable rock, sand, or gravel.

Installation Restoration (IR) Program – A comprehensive environmental program developed by the Department of Defense (DoD) to identify, investigate, and clean up hazardous waste sites at all DoD facilities (Navy, Army, Air Force, Marine Corps).

Ordnance – Military supplies, including weapons and ammunition. Unexploded ordnance – remnants of intact ordnance from earlier activities — may present a safety hazard.

No Further Response Action Planned (NFRAP) – The decision that is reached when all action necessary for the protection of human health and the environment has been completed at a hazardous release site.

Remedial Action – The long-term cleanup action that is carried out to remove the risk to human health and the environment caused by contaminants at a site.

Removal Action – The short-term or interim cleanup action that is carried out to remove the risk to human health and the environment caused by contaminants at a site.

Removal Site Evaluation – An early phase in the environmental investigation process that evaluates the need to remove contaminants. It includes assessment of the presence and extent of contamination as well as risk to human health and the environment.

Restoration Advisory Board (RAB) – An advisory board composed of members of the community, regulatory agencies, and the Navy who meet to discuss, review, and provide input on environmental investigation and cleanup activities and decisions.

Solid Waste Management Unit (SWMU; pronounced "schmoo") – As identified under the Resource Conservation and Recovery Act (RCRA), a current (or former) industrial facility that treats, stores, or disposes of hazardous waste and that is generally permitted.

Belding's savannah sparrow (Passerculus sandiwichensis beldingi), a federally protected species, makes its home at the Seal Beach National Wildlife Refuge (USFWS photo)

The Restoration Advisory Board is made up of community members who volunteer their time to support the IR Program at NAVWPNSTA Seal Beach.

Restoration Advisory Board: A Player in The Navy's Environmental Program

The NAVWPNSTA Seal Beach Restoration Advisory Board (RAB) provides a forum for community members, the Navy, and regulatory agencies to discuss cleanup issues and approaches.

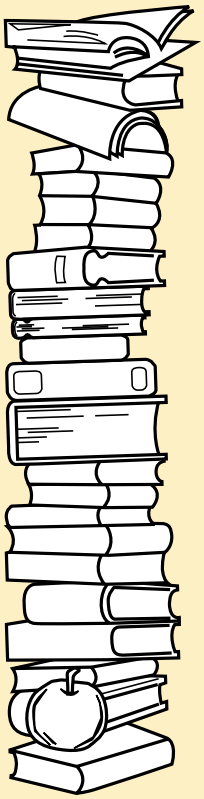
The NAVWPNSTA Seal Beach RAB was formed in 1995, and its members review and provide community input on IR Program documents and other IR issues.

The RAB currently meets on the second Wednesday of the month. The meetings are open to the public and are announced through mailers sent to all names on the Station project mailing list. The RAB and the Navy encourage you to attend. For information on the next NAVWPNSTA Seal Beach RAB meeting, contact Ms. Lindi Willhite, RAB Community Co-chair, at (714) 839-5663.

Ms. Pei-Fen Tamashiro
NAVWPNSTA, Building 110
800 Seal Beach Boulevard
Seal Beach, CA 90740-5000

Address Correction Requested

If you wish to be added to the mailing list, or no longer wish to receive mailings, please contact Ms. Pei-Fen Tamashiro at (562) 626-7897, or return this page with address label attached



INFORMATION REPOSITORIES: AVAILABLE TO YOU!!

Information repositories have been established to provide public access to technical reports and other IR Program information. Documents, RAB meeting minutes, newsletters, public meeting announcements, and other IR Program items are available for review at the following locations:

Seal Beach Public Library
Mary Wilson Branch
707 Electric Avenue
Seal Beach, CA 90740
(562) 431-3584 (call for library hours)

NAVWPNSTA Seal Beach
Environmental Office, Building 110
800 Seal Beach Boulevard
Seal Beach, CA 90740-5000
(562) 626-7897 (call for an appt. to obtain entrance to the station)

FOR MORE INFORMATION...

…On the IR Program at NAVWPNSTA Seal Beach, contact:

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